

MAGNETIC BEARING DEVICE

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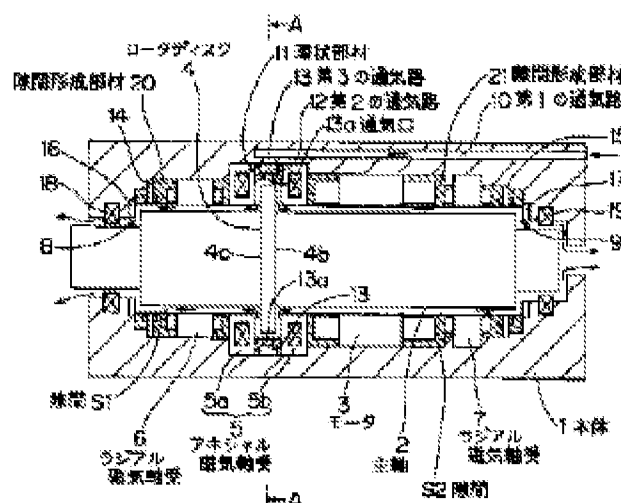
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Abstract of JP8061366

PURPOSE: To improve the cooling efficiency for a bearing, by allowing the air stream after cooling a rotor disc to flow to each gap on both the sides in the axial direction of the rotor disc, as for a device equipped with an axial magnetic bearing for controlling the displacement in the axial direction of a main spindle through a rotor disc fixed on the main shaft. **CONSTITUTION:** In contiguous to a motor 3, an axial magnetic bearing 5 for controlling the position in the axial direction of a main shaft 2 through a rotor disc 4 which is integral with the main shaft 2 is installed, and radial magnetic bearings 6 and 7 are arranged on both the sides nipping the motor 3 and the magnetic bearing 5. Further, at both the end parts of the main shaft 2, the labyrinth type sealing mechanisms 8 and 9 are arranged. Air passages 11-13 are formed on the body 1, and the rotor disc 4 is cooled by the air stream blown out towards the outer peripheral surface of the rotor disc 4 from an air ventilation port 13s. Then, the air stream is led to both the sides of the main shaft 2, and allowed to successively pass through the gaps S1 and S2 formed by the gap formation members 20 and 21 and the motor 3, radial magnetic bearings 6 and 7, etc., are cooled.



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